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10/528,839

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Shigeo Hayashi

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EXAMINER

CHU, WUTCHUNG

ART UNIT

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2619

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

| | | | |
|------------------------------|--------------------------------------|---------------------------------------|--|
| Office Action Summary | Application No. 10/528,839 | Applicant(s) HAYASHI ET AL. | |
| | Examiner WUTCHUNG CHU | Art Unit 2619 | |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 April 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-15, 21 and 22 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12, 14, 15, 21 and 22 is/are rejected.
- 7) ☒ Claim(s) 13 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. This communication is in response to application's amendment filed on 4/10/2008. Claims 1-15 and 21-22 are pending, and claims 16-18 and 20 are canceled.

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

3. Claims 1-8, 10-12, 15, 19, 21, and 22 are rejected under 35 U.S.C. 102(e) as being anticipated by Brosey (US6948186).

Regarding claim 1, Brosey discloses a multitasking message extractor (**see col. 1 line 55-col.2 line2**) comprising:

- a header analyzing section for analyzing a header of an inputted packet (**see col. 5 lines8-11 and col. 5 line 45-50**) and determining whether data stored in a payload is start data containing start information or other data (**see col. 6 lines 30-45 new message start point**);

- a data extracting section for referring to an analysis result from the header analyzing section(see col. 1line 66-col.2 line 2), and extracting the data from the payload of the packet (see col. 6 line 25);
- a buffer for storing the data extracted by the data extracting section (see col. 1line 66-col.2 line 2);
- a buffer controlling section for controlling a stored position and an accumulated data amount of the data in the buffer (see col. 6 lines2-6); and
- a start data identifying section for generating information for identifying the start data in the buffer (see col. 6 lines 30-45 new message start point), based on the analysis result from the header analyzing section and the control by the buffer controlling section (see col. 6 lines 2-6), and
- a decode section for reading out data from the buffer with a predetermined timing (see col. 10 lines 46-50 and col. 11 lines 54-56 there preferably are 4-byte wide time slots in which to unload an old message in the process of being extracted), and for performing a decode process for the data read out based on the information for identifying the start data in the buffer (see col. 8 lines 4-16), the information having been generated by the start data identifying section (see col. 6 lines 30-45 new message start point).

Regarding claim 2, Brosey teaches the start data identifying section comprises:

- a start position memory for retaining stored position information of the start data stored in the buffer (**see col. 6 lines 30-45 new message start point**); and
- a number-of-starts counter for counting a number of the start data stored in the buffer (**see col. 6 lines 30-37**).

Regarding claim 3, Brosey teaches the start position memory is a register for retaining the stored position information (**see col. 6 lines 9-16**).

Regarding claim 4, Brosey teaches the start position memory is a memory, constructed independently of the buffer, for retaining the stored position information (**see col. 1 line 66-col.2 lines 2**).

Regarding claim 5, Brosey teaches the stored position information is a write address in the buffer storing the start data (**see col. 7 line 1, col. 7 lines 44-46, and col. 8 lines 62-65**).

Regarding claim 6, Brosey teaches the stored position information is information representing a position of the start data relative to first data stored in the buffer (**see col. 6 line 38-41**).

Regarding claim 7, Brosey teaches the buffer controlling section compares the accumulated data amount against a predetermined threshold amount and, when the accumulated data amount becomes equal to or greater than the threshold amount, outputs a predetermined notification signal (**see col. 11 lines 24-34 where the**

message processor identifies lost messages either due to corrupt packets or to buffer overflow, and it is inherent for buffer to have a predetermined level for it to detect overflowing, which corresponds to threshold amount).

Regarding claim 8, Brosey teaches when detecting the predetermined notification signal, the number-of-starts counter displays a number of the start data contained in an amount of data corresponding to the threshold amount **(see col. 7 lines 62-67).**

Regarding claim 10, Brosey teaches the threshold number is a number of areas in the start position memory which enables retention of the stored position information **(see col. 6 lines 30-36).**

Regarding claim 11, Brosey teaches wherein the decode section reads out data from the buffer with the predetermined timing **(see col. 10 lines 46-50 and col. 11 lines 54-56 there preferably are 4-byte wide time slots in which to unload an old message in the process of being extracted)**, obtains stored position information and a count number from the start data identifying section **(see col. 6 lines 31-37 and col. 8 lines 4-16)**, separates the start data contained in the data read out based on the stored position information and the count number into start information and data **(see col. 6 lines 17-37)**, and performs the decode process for the data read out based on the start information **(see col. 8 lines 2-3).**

Regarding claim 12, Brosey teaches

- wherein the buffer controlling section compares the accumulated data amount against a predetermined threshold amount, and , when the accumulated data amount becomes equal to or greater than the threshold amount, outputs a predetermined notification signal **(see col. 11 lines 24-34 generates a flag that identifies messages lost due to overflow in the message buffer)**,
- wherein, when detecting the predetermined notification signal, the number-of-starts counter displays a number of the start data contained in an amount of data corresponding to the threshold amount **(see col. 6 lines 31-37 and col. 8 lines 4-16)**, and
- wherein the decode section reads out an amount of data corresponding to the threshold amount from the buffer at a timing of receiving the notification signal **(see col. 11 lines 54-57 there preferably are 4-byte wide time slots in which to unload an old message in the process of being extracted, and in which to re-load an active message to be extracted)**.

Regarding claim 15, Brosey teaches a packet processing method for processing packets in which variable length data is split and stored, the packet processing method, comprising:

- An analysis step of analyzing a header of an inputted packet, and determines whether data stored in a payload is start data containing start information or other data**(see col. 3 lines 59-60)**;

- An extracting step of referring to an analysis result from the analyzing step **(see col. 1line 66-col.2 line 2)**, and extracting the data from the payload of the packet **(see col. 6 line 25)**;
- A step of storing the data extracted in the extracting step to a buffer **(see col. 1line 66-col.2 line 2)**;
- A control step of controlling a stored position and an accumulated data amount of the data in the buffer **(see col. 6 lines 2-6)**;
- An identifying step of generating information for identifying the start data in the buffer **(see col. 5 lines 64)**, based on the analysis result from the analyzing step and the control from the control step **(see col. 6 lines 2-6)**;
- A reading step of reading out data form the buffer with a predetermined timing **(see col. 10 lines 46-50 and col. 11 lines 54-56 there preferably are 4-byte wide time slots in which to unload an old message in the process of being extracted)**;
- A separating step of separating, based on the information for identifying the start data, the start data contained in the data read out into start information and data **(see col. 6 lines 17-37)**; and
- A decoding step of performing a decode process for the data read out based on the start information **(see col. 6 lines 30-45 new message start pointer)**.

Regarding claim 19, Brosey teaches a computer readable medium having recorded thereon a computer readable programmable for causing a computer to execute a packet processing method for processing packets in which variable length data is split stored, the packet processing **(col. 3 lines 4-33)** method comprising:

- An analysis step of analyzing a header of an inputted packet, and determines whether data stored in a payload is start data containing start information or other data**(see col. 3 lines 59-60)**;
- An extracting step of referring to an analysis result from the analyzing step **(see col. 1line 66-col.2 line 2)**, and extracting the data from the payload of the packet **(see col. 6 line 25)**;
- A step of storing the data extracted in the extracting step to a buffer **(see col. 1line 66-col.2 line 2)**;
- A control step of controlling a stored position and an accumulated data amount of the data in the buffer **(see col. 6 lines2-6)**;
- An identifying step of generating information for identifying the start data in the buffer **(see col. 5 lines 64)**, based on the analysis result from the analyzing step and the control from the control step **(see col. 6 lines 2-6)**;
- A reading step of reading out data form the buffer with a predetermined timing **(see col. 10 lines 46-50 and col. 11 lines 54-56 there preferably are 4-byte**

wide time slots in which to unload an old message in the process of being extracted);

- A separating step of separating, based on the information for identifying the start data, the start data contained in the data read out into start information and data **(see col. 6 lines 17-37)**; and
- A decoding step of performing a decode process for the data read out based on the start information **(see col. 6 lines 30-45 new message start pointer)**.

Regarding claim 21, Brosey teaches an integrated circuit to be incorporated into a device **(see col. 11 lines 55-60)** which processes packets in which variable length data is split and stored,

- Wherein the device comprises a buffer for storing data **(see col. 3 lines 52-58)**, and
- Wherein the integrated circuit integrates circuitry functioning **(see col. 11 lines 55-60)** as:
 - A header analyzing section for analyzing a header of an inputted packet **(see col. 3 lines 59-60)**, and determining whether data stored in a payload is start data containing start information or other data **(see col. 5 line 64-66)**;
 - A data extracting section for referring to an analysis result from the header analyzing section **(see col. 1 line 66-col.2 line 2)**, and extracting the data from the payload in the packet **(see col. 6 line 25)**;

- A buffer for storing the data extracted by the data extracting section (**see col. 1 line 66-col.2 line 2**);
- A buffer controlling section for controlling a stored position and an accumulated data amount of the data in the buffer (**see col. 6 lines 2-6**);
- A start data identifying section for generating information for identifying the start data in the buffer (**see col. 5 lines 64**), based on the analysis result from the header analyzing section and the control by the buffer controlling section (**see col. 6 lines 2-6**);
- a decode section for reading out data from the buffer with a predetermined timing (**see col. 10 lines 46-50 and col. 11 lines 54-56 there preferably are 4-byte wide time slots in which to unload an old message in the process of being extracted**), and for performing a decode process for the data read out based on the information for identifying the start data in the buffer (**see col. 8 lines 4-16**), the information having been generated by the start data identifying section (**see col. 6 lines 30-45 new message start pointer**).

Regarding claim 22, Brosey teaches wherein the decode section reads out data from the buffer with the predetermined timing (**see col. 10 lines 46-50 and col. 11 lines 54-56 there preferably are 4-byte wide time slots in which to unload an old message in the process of being extracted**), obtains stored position information and a count number from the start data identifying section (**see col. 6 lines 31-37 and col. 8 lines 4-16**), separates the start data contained in the data read out based on the stored

position information and the count number into start information and data (**see col. 6 lines 17-37**), and performs the decode process for the data read out based on the start information (**see col. 8 lines 2-3**).

Claim Rejections - 35 USC § 103

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claim 9 rejected under 35 U.S.C. 103(a) as being unpatentable over Brosey.

Regarding claim 9, Brosey teaches the buffer controlling section compares the number in the number-of-starts counter (**see col. 6 lines 30-36, and col. 7 lines 62-67**), and does not explicitly disclose:

- against a predetermined threshold number and, when the number becomes equal to or greater than the threshold number, outputs a predetermined notification signal.

However, Brosey teaches the message processor identifies lost messages either due to corrupt packets or to buffer overflow (**see col. 11 lines 24-34**), where a upper limit is set to according to the size of the buffer and a message is sent if limit exceeded. It would have been obvious to one of ordinary skill in the art at the time the invention was made to include threshold number of number-starts counter, because a predetermined threshold, as in Brosey, is a method for maintaining buffer.

7. Claim 14 is rejected under 35 U.S.C. 103(a) as being unpatentable over Brosey in view of Fujii et al., hereinafter Fujii, (US2002/0067744).

Regarding claim 14, Brosey teaches when a transport stream packet under MPEG (**see col. 3 lines 59-60**) and program (**col. 3 lines 4-33**) technique that,

- the header analyzing section analyzes a header of a TS packet in the inputted transport stream (**see col. 3 lines 59-60**), and determines whether data stored in a payload is start data containing a header or other data (**see col. 5 line 64-66**),
- the data extracting section refers to an analysis result from the header analyzing section (**see col. 1line 66-col.2 line 2**), and extracts data from the payload of the TS packet (**see col. 6 line 25 and col. 8 lines 2-16**),
- the buffer stores the data extracted by the data extracting section (**see col. 1line 66-col.2 line 2**),

- the buffer controlling section controls a stored position and an accumulated data amount of the data in the buffer (**see col. 6 lines 2-6**), and
- the start data identifying section generates information for identifying the start data in the buffer (**see col. 6 lines 30-45 new message start point**), based on the analysis result from the header analyzing section and the control by the buffer controlling section (**see col. 6 lines 2-6**).

disclose all the subject matter of the claimed invention with the exception of:

- stores variable-length PES data is inputted

Fujii from the same or similar fields of endeavor teaches the use of PES packet of variable length (**see Fujii paragraph 54**). Thus, it would have been obvious to one of ordinary skill in the art at the time of the invention to use the PES packet in the multitasking message extractor of Brosey in order to elementary stream to be divided into packets and encapsulated sequential data.

Allowable Subject Matter

8. Claim 13 is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Response to Arguments

9. Applicant's arguments, see applicant's remarks on page 11, filed 4/10/2008, with respect to claim objection have been fully considered and are persuasive. The claim objection of claims 11-13 has been withdrawn.

10. Applicant's arguments, see applicant's remarks on page 11, filed 4/10/2008, with respect to 101 rejection have been fully considered and are persuasive. The 101 rejection on claim 17-20 has been withdrawn.

11. **With regard to applicant's remark for claims 1, 15, 19, and 21 (page 14),** applicant submits that Brosey fails to disclose a decode section for reading out data from the buffer with a predetermined timing, and for performing a decode process for the data read out based on the information for identifying the start data in the buffer, the information having been generated by the start data identifying section.

Brosey in col. 8 lines 2- 3 teaches message processor uses the New message start pointer to find the start of a new message when the start of the new message is located, all of the information about the message (e.g. message length, and address type) is extracted, which corresponds to identifying the start data in buffer.

Brosey in col. 10 lines 46-50 and col. 11 lines 54-56 teaches 4-byte wide time slots in which to unload an old message in the process of being extracted, and extract and assemble multiple complete messages from packet data in multiple streams; which messages are reassemble and extract from buffer, and unload in a 4-byte wide time slots, therefore meet all limitations and rejection respectfully remains.

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Examiner's Note: examiner has cited particular columns and line numbers in the references applied to the claims above for the convenience of the applicant. Although the specified citations are representative of the teachings of the figures may apply as specific limitations within the individual claim, other passages and figures may apply as well. It is respectfully requested from the applicant in preparing responses, to fully consider the references in entirety as potentially teaching all or part of the claimed invention, as well as the context of the passage as taught by the prior art or disclosed by the Examiner.

In the case of amending the claimed invention, applicant is respectfully requested to indicate the portion(s) of the specification which dictate(s) the structure relied on for proper interpretation and also to verify and ascertain the metes and bounds of the claimed invention.

Conclusion

12. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP

§ 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to WUTCHUNG CHU whose telephone number is

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(571)270-1411. The examiner can normally be reached on Monday - Friday 1000 - 1500EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Edan Orgad can be reached on 571 272 7884. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/WC/
Wutchung Chu

/Edan Orgad/
Supervisory Patent Examiner, Art Unit 2619

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